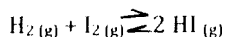


7. For the following system at equilibrium:

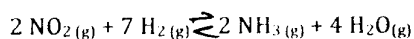


a. Predict the shift in equilibrium when more $\text{HI}(\text{g})$ is added to the system.

b. How will the concentration of I_2 change?

adding something on the product side of the rxn. will cause eq. to shift to the reactant side. In other words, the \rightleftharpoons rxn. will be favored, or you could say that eq. shifts to the left.
→ conc. of I_2 will increase

8. For the reaction below, predict the direction the equilibrium will shift given the following changes.
Temperature and volume are held constant.



a. addition of ammonia

← reverse rxn is favored to use up the additional ammonia

b. removal of nitrogen dioxide

← reverse rxn is favored to replace the lost nitrogen

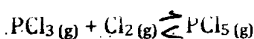
c. removal of water vapour

→ forward rxn is favored to replace the water

d. addition of hydrogen

→ use up additional H_2

9. At a particular temperature, the following reaction has an equilibrium constant, K_{eq} of 0.18



More PCl_3 is added to the system. Will the value of K_{eq} increase or decrease?

not change K

$K = 0.18$ after eq.